AMENDMENTS TO THE CLAIMS

1.   (Currently Amended) A moving picture coding method for coding an inputted original coded moving picture signal on a picture-by-picture basis and generating a coded stream, wherein the inputted original coded moving picture signal includes coded picture data for each picture, and a display order information value for each picture, and the display order information ~~for each picture has a value~~ values are in sequence indicating the display order of the ~~respective picture~~ pictures in the original coded moving picture signal, the method comprising:

a detecting step of detecting whether a sequence of ~~the values of the~~ display order information values for the pictures to be included in the generated coded stream ~~are sequential or non-sequential~~ is different from the sequence of the display order information values of the original coded moving picture signal;

a flag information generation step of generating a flag indicating that the sequence of ~~values of the~~ display order information values for the pictures included in the generated coded stream is different from the sequence of display order information values of the original coded moving picture signal ~~are non-sequential~~ when said detecting step detects that ~~the values of~~ the sequence of display order information values for the pictures to be included in the generated coded stream ~~are non-sequential~~ is different from the sequence of display order information values of the original coded moving picture signal; and

a coded stream generating step of generating a coded stream comprising: the coded picture data for each picture to be included in the generated coded stream; and the flag inserted into the coded stream so as to indicate a position among the coded picture data in the generated coded stream where the sequence of display order of the pictures is different from the display order of pictures in the original coded moving picture signal ~~non-sequential~~.

2.   (Canceled).

3.   (Canceled).

4.   (Previously Presented) The moving picture coding method according to Claim 1, wherein in the coded stream generating step, the flag is inserted between two pictures in the generated coded stream, said two pictures being non-sequential in display order.

5.   (Canceled).

6.   (Currently Amended) A moving picture coding method for coding an inputted original coded moving picture signal on a picture-by-picture basis and generating a coded stream, wherein the inputted original coded moving picture signal includes coded picture data for each picture, and a display order information value for each picture, and the display order information for each picture has a value values are in sequence indicating the display order of the respective picture pictures in the original coded moving picture signal, the method comprising:

a detecting step of detecting whether a sequence of the values of the display order information values for the pictures to be included in the generated coded stream are sequential or non-sequential is different from the sequence of the display order information values of the original coded moving picture signal;

a flag information generation step of generating a flag indicating that the sequence of values of the display order information values for the pictures included in the generated coded stream is different from the sequence of display order information values of the original coded moving picture signal are non-sequential when said detecting step detects that the values of the display order information values for the pictures to be included in the generated coded stream are non-sequential is different from the sequence of display order information values of the original coded moving picture signal;

a coded stream generating step of generating a coded stream comprising: a predetermined coding unit and a further coding unit such that the predetermined coding unit comprises a plurality of picture data of respective pictures to be included in the generated coded stream including a first intra picture and such that the further coding unit is located after the predetermined coding unit and comprises picture data of a picture whose display order is later than a display order of the first intra picture among the pictures included in the predetermined coding unit; and the flag inserted the coded

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stream so as to indicate a position among the coded picture data <u>in the generated coded stream</u> where the <u>sequence of</u> display order of the pictures is <u>different from the display order of pictures in the original coded moving picture signal</u><s>non-sequential</s>.

7.   (Previously Presented) The moving picture coding method according to Claim 6,

      wherein in the coded stream generating step, the coded stream is generated such that a display order of pictures in the predetermined coding unit is sequential, and such that the display order of the pictures in said predetermined coding unit is located earlier than a display order of pictures in a predetermined coding unit immediately following said predetermined coding unit.

8.   (Currently Amended) A moving picture decoding method for decoding, on a picture-by-picture basis, a coded stream comprising: coded picture data for each picture included in the coded stream; <u>a</u> display order information <u>value</u> for each picture included in the coded stream; and a flag inserted into the coded stream so as to indicate a position among the coded picture data where <s>the</s> <u>a</u> <u>sequence of</u> display order <u>information values</u> of the pictures <u>in the coded stream</u> is <u>different from a sequence of display order information values of pictures in an original coded moving picture signal from which the coded stream has been generated</u><s>non-sequential</s>, the method comprising:

      an information extraction step of extracting the flag indicating a position among the coded picture data where <s>values of</s> the <u>sequence of</u> display order information <u>values</u> of the pictures is <u>different from the sequence of display order information values of pictures in the original coded moving picture signal</u><s>non-sequential</s>; and

      a management step of managing a storage memory area for storing a decoded picture based on the flag.

9.   (Currently Amended) The picture decoding method according to Claim 8,

      wherein in the management step, a picture having a <s>value of</s> display order information <u>value</u> that indicates that the picture is the earliest in display order among decoded pictures stored in the storage memory area is determined based on the display order information and the flag information, and the determined picture is determined as a picture to be removed.

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10.   (Previously Presented) The moving picture decoding method according to Claim 9,

wherein in the management step, clip information is given to the decoded picture stored in the storage memory area, said clip information being updated when the flag is extracted, and a picture whose position is the earliest in display order among the decoded pictures stored in the area is determined based on the display order information and the clip information, and the determined picture is determined as a picture to be removed.

11.   (Currently Amended) The moving picture decoding method according to Claim 8, further comprising an invalid picture storage step of storing an invalid picture in the storage memory area when ~~values indicated by~~ the sequence of the display order information values of the pictures ~~are in non-sequential order~~ in the coded stream is different from the sequence of display order information values of pictures in the original coded moving picture signal,

wherein in the management step, whether or not to store an invalid picture in the area is determined based on the flag and the display order information, and

in the invalid picture storage step, an invalid picture is stored in the storage memory area based on a result of the determination made in the management step.

12.   (Currently Amended) A moving picture coding apparatus for coding an inputted original coded moving picture signal on a picture-by-picture basis and generating a coded stream, wherein the inputted original coded moving picture signal includes coded picture data for each picture, and a display order information value for each picture, and the display order information ~~for each picture has a value~~ values are in sequence indicating the display order of the ~~respective picture~~ pictures in the original coded moving picture signal, the apparatus comprising:

a detecting unit operable to detect whether a sequence of ~~the values of the~~ display order information values for the pictures to be included in the generated coded stream ~~are sequential or non-sequential~~ is different from the sequence of the display order information values of the original coded moving picture signal;

a flag information generation unit operable to generate a flag indicating that the sequence of

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values of the display order information values for the pictures included in the generated coded stream is different from the sequence of display order information values of the original coded moving picture signal are non-sequential when said detecting unit detects that the values of the sequence of display order information values for the pictures to be included in the generated coded stream are non-sequential is different from the sequence of display order information values of the original coded moving picture signal; and

a coded stream generating unit operable to generate a coded stream comprising: the coded picture data for each picture to be included in the generated coded stream; and the flag inserted into the coded stream so as to indicate a position among the coded picture data in the generated coded stream where the sequence of display order of the pictures is different from the display order of pictures in the original coded moving picture signalnon-sequential.

13.   (Currently Amended) A moving picture decoding apparatus for decoding, on a picture-by-picture basis, a coded stream comprising: coded picture data for each picture included in the coded stream; display order information for each picture included in the coded stream; and a flag inserted into the coded stream so as to indicate a position among the coded picture data where a sequence of display order information values of the pictures in the coded stream is different from a sequence of display order information values of pictures in an original coded moving picture signal from which the coded stream has been generatedthe display order of the pictures is non-sequential, the apparatus comprising:

an information extraction unit operable to extract the flag indicating a position among the coded picture data where values of the sequence of display order information values of the pictures is different from the sequence of display order information values of pictures in the original coded moving picture signalnon-sequential; and

a management unit operable to manage a storage memory area for storing a decoded picture based on the flag.

14.   (Currently Amended) A computer readable recording medium encoded with a computer program for coding an inputted original coded moving picture signal on a picture-by-picture basis

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and generating a coded stream, wherein the inputted <u>original</u> coded moving picture signal includes coded picture data for each picture, and <u>a</u> display order information <u>value</u> for each picture, and the display order information <u>values are in sequence</u> ~~for each picture has a value~~ indicating the display order <u>pictures in the original coded moving picture signal</u>~~of the respective picture~~, the program causing a computer to execute at least:

a detecting step of detecting whether <u>a sequence of</u> ~~the values of~~ the display order information <u>values</u> for the pictures to be included in the generated coded stream ~~are sequential or non-sequential~~ <u>is different from the sequence of the display order information values of the original coded moving picture signal</u>;

a flag information generation step of generating a flag indicating that<u>the sequence of</u> ~~the values of the~~ display order information <u>values for the pictures included in the generated coded stream is different from the sequence of display order information values of the original coded moving picture signal</u> ~~are non-sequential~~ when said detecting step detects that ~~the values of~~ <u>the sequence of</u> display order information <u>values</u> for the pictures to be included in the generated coded stream ~~are non-sequential~~<u>is different from the sequence of display order information values of the original coded moving picture signal</u>; and

a coded stream generating step of generating a coded stream comprising: the coded picture data for each picture to be included in the generated coded stream; and the flag inserted into the coded stream so as to indicate a position among the coded picture data <u>in the generated coded stream</u> where the <u>sequence of</u> display order of the pictures is ~~non-sequential~~ <u>different from the display order of pictures in the original coded moving picture signal</u>.

15.	(Currently Amended) A computer readable recording medium encoded with a computer program for decoding, on a picture-by-picture basis, a coded stream comprising: coded picture data for each picture included in the coded stream; display order information for each picture included in the coded stream; and a flag inserted into the coded stream so as to indicate a position among the coded picture data where <u>a sequence of display order information values of the pictures in the coded stream is different from a sequence of display order information values of pictures in an original</u>

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coded moving picture signal from which the coded stream has been generated~~the display order of the~~ ~~pictures is non-sequential~~, the program causing a computer to execute at least:

an information extraction step of extracting the flag indicating a position among the coded picture data where ~~values of~~ the sequence of display order information values of the pictures is different from the sequence of display order information values of pictures in the original coded moving picture signal~~non-sequential~~; and

a management step of managing a storage memory area for storing a decoded picture based on the flag.